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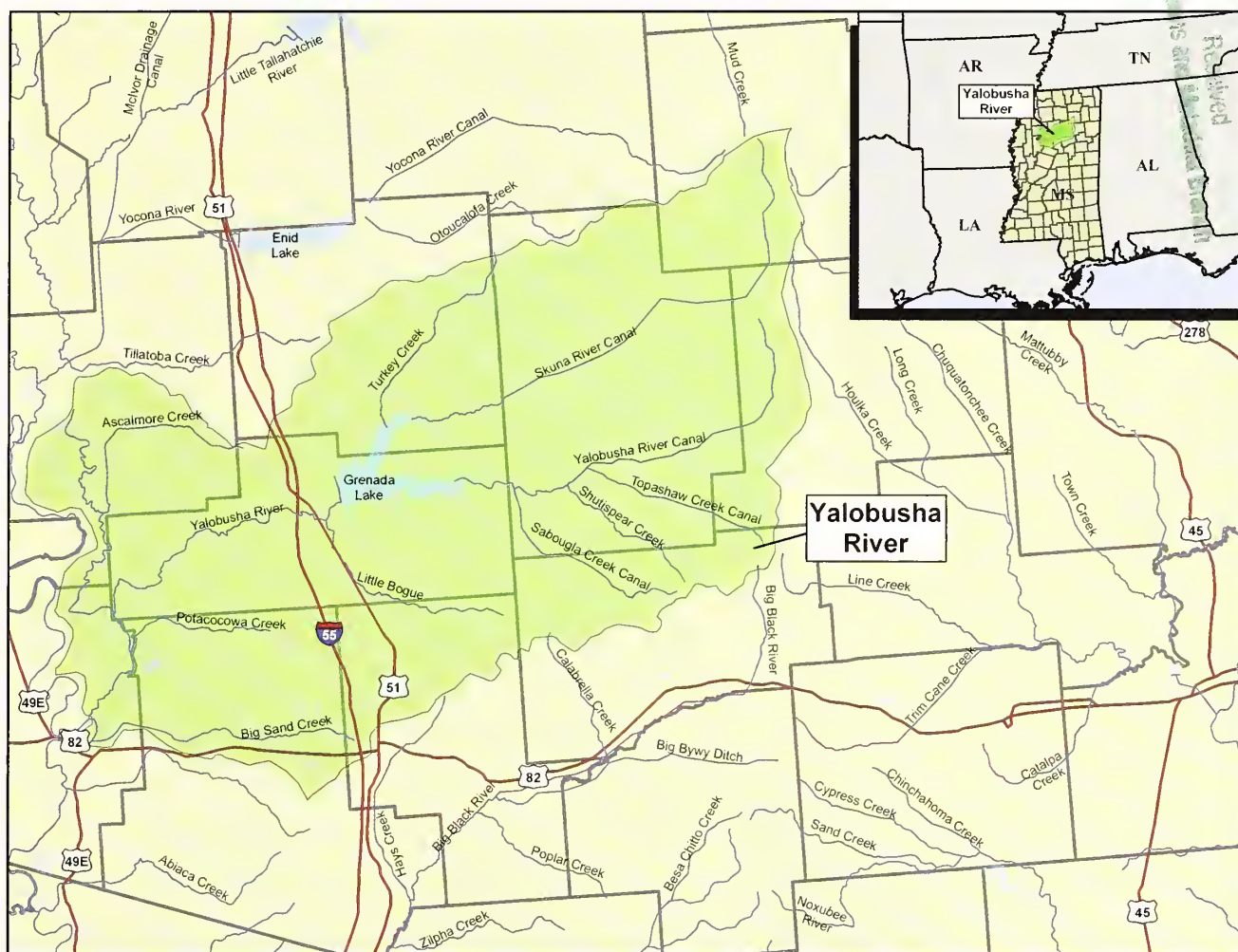
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Conservation Effects Assessment Project (CEAP)

Watershed Fact Sheet

Yalobusha River Watershed, Mississippi: 2005-2007

An ARS* Benchmark Research Watershed, one of 24 CEAP watershed projects.



CEAP Assessment

Evaluate conservation practices effects on soil quality, water quality and quantity.

- A Total Maximum Daily Load (TMDL) limit has been set for allowable levels of sediment, pathogens, pesticides, and turbidity.

Watershed Description

- 64,000 acres
- 53% forest, 19% pasture, 18% cropland
- Streams have been designated impaired water bodies by Mississippi.
- Impaired water quality parameters: nutrients, oxygen.

Issues: Channel instability and streambank erosion have severely degraded stream and riparian habitats; sediment loss is twice national average.

*Agricultural Research Service



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Doug Shields, ARS National Sedimentation Laboratory, standing by gully inlet stabilized by switch grass hedges.

Approach

Water Sampling: Sediment, nitrogen, and phosphorus.

Watershed Models: Will use data from lab experiments to model contributions of subsurface drainage flow and seepage erosion to stream flow and bank failure under various conservation practices.

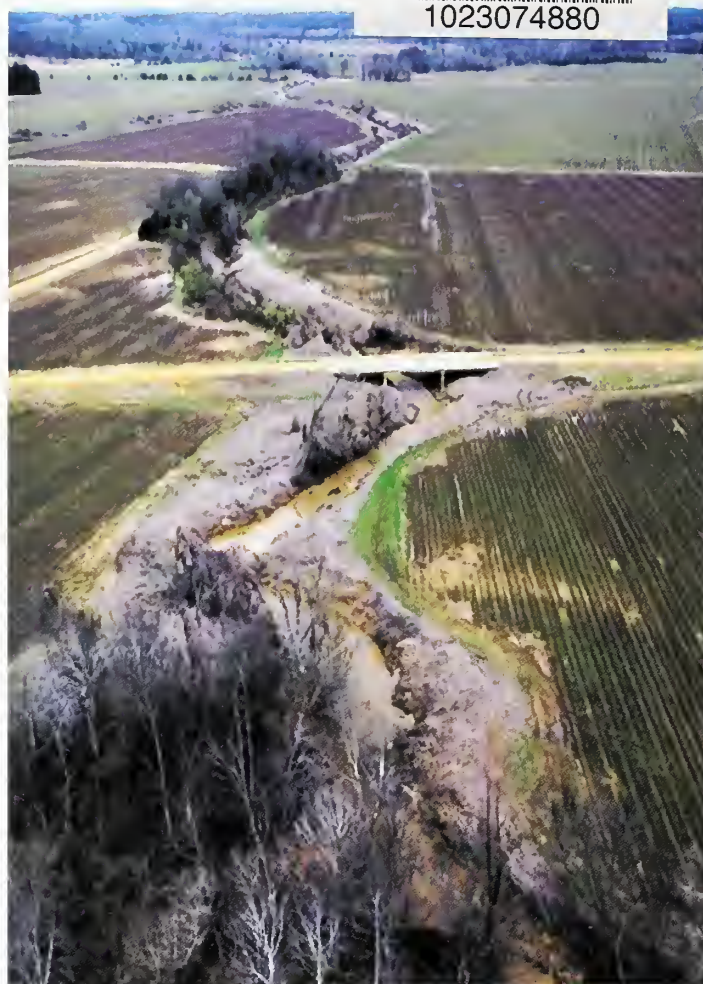
Research: Evaluate mechanisms of seepage erosion and its contribution to streambank failure and effects of soil conservation practices on these processes.

Communicating Results

Results will be presented at national science meetings and published in journals. Data will be posted on USDA-ARS National Sedimentation Laboratory website. A final report will document findings.

Collaborators

- USDA Natural Resources Conservation Service
- U.S. Geological Service
- U.S. Army Corps of Engineers, Vicksburg District
- Local landowners and drainage districts
- Mississippi State University Cooperative Extension Service
- University of Mississippi



Meandering stream reach of Little Topashaw Creek with stream banks migrating into adjacent cropland due to bank failure.

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<http://www.nrcs.usda.gov/technical/nri/ceap/>